

Undergraduate Research on General Aviation Hypoxia: A Student's Perspective



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Background

During the fall academic term of 2016, an opportunity arose through the College of Aviation to serve as an undergraduate research assistant. Through discussion with faculty mentors, it was decided that a severely overlooked aspect of the aviation industry was survivors of hypoxia, especially in the less regulated general aviation community. It was the hope that the results of this study would help the general aviation community learn from it and evolve their training as necessary.

Abstract

The problem this study addresses is the uncertainty of the common circumstances that general aviation pilots find themselves in that create a hypoxic state, as well as whether or not that pilot reported the occurrence to the proper establishments. The results of this study showed not only those that were impacted the greatest by hypoxia, but also a caring concern for reporting these events. The key elements for this research were:

- Level of flying experience that encountered hypoxia
- Reporting statistics
- Reasons for not reporting the event
- Suggestions for bettering flight physiology training

Methods

Survey questions and data recording methods were formulated and went through an IRB process to be published in a Survey Monkey. Once the survey was published the team sought out distribution methods that would reach the targeted general aviation audience. The final methods used were:

- Distributed via email by Curt Lewis and Aircraft Owners and Pilots Association (AOPA)
- Survey open for 2 and a half months
- 344 responses

Conclusions

The College of Aviation with the help of the Undergraduate Research Institute presented the opportunity to explore research in the aviation industry. This opportunity led to a survey that showed even experienced pilots in a smaller community could experience the dangers of hypoxia, even at lower altitudes and still do not report it. It is the hope that the results of this study will be shared with companies and agencies that may distribute and coordinate their training as necessary to make the general aviation community more safe.

References

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